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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/610,481	06/30/2003	David Tuschel	030354	8808
41396	7590	11/22/2005	EXAMINER	
DUANE MORRIS LLP IP DEPARTMENT 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103-4196			LAUCHMAN, LAYLA G	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/610,481	TUSCHEL ET AL.	
	Examiner	Art Unit	
	L. G. Lauchman	2877	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5, 11-13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) 6-10, 14 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/2004</u> | 6) <input type="checkbox"/> Other: ____  |

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5, 11-13, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by  
Campion et al (US 6,151,119).

As to Claim 5, the patent teaches a method of inspection of a dopant material in as semiconductor wafer, comprising: a) illuminating an implanted surface of the ion implanted semiconductor wafer (target region 14) with a flood illumination of monochromatic light of wavelength  $\lambda_1$ , the flood illumination illuminating at least an area A (14) of the wafer, the implanted surface having Raman active features induced by the ion implantation; then b) imaging the implanted surface of the wafer using light scattered from the wafer of a wavelength which is Raman shifted in frequency from the light of wavelength  $\lambda_1$ . (see col. 4, lines 34 – col. 5, lines 52; col. 5, lines 3-8).

As to Claims 11,13, 15, and 16, where the imaging forms an image in two spatial directions using a single Raman shifted wavelength  $\lambda_2$ , where the ion implanted semiconductor wafer is a silicon wafer, and the frequency of the light of wavelength  $\lambda_2$  is Raman shifted from frequency of the light of wavelength  $\lambda_1$  by the Raman shift of single crystal silicon of approximately  $520\text{ cm}^{-1}$ , the semiconductor wafer is a silicon wafer, and the frequency of the light of a wavelength  $\lambda_2$  is Raman shifted from frequency of the light of wavelength  $\lambda_1$  by the Raman shift of fully amorphous silicon of approximately  $480\text{ cm}^{-1}$ . (see col. col. 7, lines 3-54).

*Allowable Subject Matter*

Claims 1-4 are allowed.

As to Claim 1, the prior art of record taken along or in combination, fails to disclose or render obvious correcting the image of the implanted area using the results of the imaging of the area of the surface of the uniformly Raman Scattering material, in combination with the rest of the limitations of the claim.

As to Claim 2, the prior art of record taken along or in combination, fails to disclose or render obvious analyzing the image for evidence of inclusions having a Raman shift peak having a full width at half maximum above  $4\text{ cm}^{-1}$  but below  $30\text{ cm}^{-1}$ , in combination with the rest of the limitations of the claim.

As to Claim 3, the prior art of record taken along or in combination, fails to disclose or render obvious analyzing the image for evidence of inclusions having a fundamental or second order Raman shift peak having a full width at half maximum above  $30\text{ cm}^{-1}$  but below  $100\text{ cm}^{-1}$ , in combination with the rest of the limitations of the claim.

Claim 6-10,14,18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. G. Lauchman whose telephone number is (571) 272-2418.

The examiner's normal work schedule is 8:00am to 4:30pm (EST), Monday through Friday. If attempts to reach examiner by the telephone are unsuccessful, the examiner's supervisor Gregory J. Toatley, Jr. can be reached on (571) 272-2059, ext. 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC receptionist whose telephone number is (571) 272-1562.

A handwritten signature in black ink, appearing to read 'L. G. Lauchman', with a stylized flourish at the end.

L. G. Lauchman  
Primary Examiner  
Art Unit 2877

November 14, 2005